

REPORT DOCUMENTATION

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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) University of Florida, Division of Sponsored Research 219 Grinter Hall, Gainesville, FL 32611, (352) 392-1582 Dr. Thomas E. Walsh, Director				8. PERFORMING ORGANIZATION REPORT NUMBER # 1 and final	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) AFOSR/ NE 110 Duncan Avenue, Room B115 Bolling AFB 20332-8050 Atten: Joyce A. Burch, AFOSR/PKA, Phone: (202) 767-4944				10. SPONSORING/MONITORING AGENCY REPORT NUMBER F49620-98-1-0300	
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13. ABSTRACT (Maximum 200 words) The above grant was a DURIP instrumentation award. With the award the principal investigator acquired an Ando optical spectrum analyzer and IR lasers.					
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Date: 4/12/00

To: AFOSR/NE

Fr: Peter Zory

Re: Equipment Grant F49620-98-1-0300 / Final Report

The title of the proposal which lead to the above Durip-98 AFOSR Grant was "Instrumentation for Characterizing the Spatial and Spectral Coherence of High Power Semiconductor Lasers". The main purpose in writing the proposal was to acquire some relatively high-priced equipment which would help us in our efforts to be successful on a contract we had at the time with the Air Force Research Laboratory (AFRL) in Albuquerque, NM.

The largest fraction of the grant money was spent on an Ando Optical Spectrum Analyzer, a state of the art instrument for measuring the spectral content in semiconductor laser beams. In our work on the "modulated-cap, thin p-clad" (MCTC) lasers with built-in diffraction gratings, the Ando apparatus was a great time-saver. Having the ability to quickly look at the lasing and non-lasing longitudinal modes in large numbers of devices in a relatively short time made it possible for us to have rapid turn-around on design changes. At the present time the Ando is being used routinely in our spectral analysis work on contracts involving the development of semiconductor laser sensors. In the middle of the AFRL contract, our Argon Laser used to make the diffraction gratings mentioned above, died and we had to get a new one. As a consequence, we were unable to buy the state-of-the art beam analysis system that was proposed in the original contract.

While working on the AFRL Contract mentioned above, we received another Contract from the AFRL mid-IR group in Albuquerque. As a consequence, we decided to spend the remaining part of the grant money on equipment for characterizing mid-IR lasers. At the present time that equipment is finding heavy use in a Contract we have with Sarnoff Corp. They in turn are presently doing mid-IR contact work for the aforementioned AFRL group.

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